

# **WEBER STATE UNIVERSITY**

## **WATTIS BUSINESS BUILDING MECHANICAL UPGRADES PROGRAMMATIC SCOPING DOCUMENT**

**DIVISION OF FACILITIES  
CONSTRUCTION MANAGEMENT**

**DFCM PROJECT No. 15110810**



**WEBER STATE UNIVERSITY  
FACILITIES MANAGEMENT  
2015**

WHW Engineering, Inc.  
8619 South Sandy Parkway #101  
Sandy, Utah 84070  
p 801.466.4021 – f 801.466.8536  
[excellence@whw-engineering.com](mailto:excellence@whw-engineering.com)



## **Weber State University Wattis Business Building Mechanical Upgrades Scoping Document**

The Wattis Business building was originally constructed in 1981. The building is a 2 story building, with approximately 62,000 square feet. The original mechanical system is a dual duct heating and cooling system. There are 4 existing fan rooms. The heating is served by steam fed from the central plant, and the cooling is chilled water that is fed from the central plant. The current fire sprinklers to portions of the building are inadequate. The existing ceilings are primarily hard ceilings with access panels for service to the dual duct boxes. The ceilings and lighting are showing their age. The access to the mechanical equipment is difficult and cumbersome. The existing dual duct boxes and controls system have exceeded their typical life, resulting in regular control and maintenance problems throughout the building.

The primary intent of this project is to upgrade the existing mechanical system for the building. It is anticipated that this will be a mechanical prime AE team. Along with the mechanical upgrades are associated ceiling, lighting, and sprinkler upgrades. The following is a brief scope summary for each discipline in the WSU Wattis Building upgrades project.

### **Mechanical:**

Upgrade the existing mechanical system. Change over from central steam and central chilled water, to a water cooled VRF system per the new WSU campus standard. Tie into the central chilled water / future condenser water loop for the heat rejection. Remove the existing dual duct distribution system and replace with zoned indoor DX units. Coordinate locations and types of units with facilities management and building representatives. Provide an Energy Recovery Ventilation (ERV) system for outside air and exhaust. Provide manufacturer's VRF controls system, with a BACNET interface to the campus Johnson Metasys system.

### **Architectural:**

In order to support the extent of the mechanical upgrades, this project will require removal and replacement of ceilings throughout the building. Coordinate type and style with facilities management and building representatives. It is anticipated that the majority of ceilings will be typical campus standard ceilings, with limited special treatment at entryways and potentially primary conference rooms. Repainting of walls, particularly in areas of high construction traffic may also be required. Architectural scope may also include an alternate to upgrade the finishes in the existing restrooms.

### **Plumbing:**

Provide the necessary plumbing work for the condensate drains associated with the new HVAC equipment. The domestic water heating shall reuse 2 existing hybrid electric heat pump water heater(s) which are about two years. Project shall relocate these into a mechanical room. Plumbing scope shall also include removal of the existing galvanized piping and replacement with copper. Plumbing scope may include an alternate to upgrade the plumbing fixtures along with the architectural finishes in the existing restrooms.

**Fire Protection:**

Provide a full wet pipe fire sprinkler system for the building. Current service to portions of the building are inadequate. The University will bring sufficient fire water service to the building as part of a separate project. This project shall include the remaining feed line from the new campus system into the building, as well as a new riser, FDC, test and drain, etc. and new sprinklers for the entire building.

**Electrical:**

Provide the electrical power modifications as required to feed the new HVAC systems for the building. Remove and replace all lighting in the building. New lighting shall be high efficiency LED fixtures to match new campus standards. Coordinate with facilities management and building representatives. As an alternate, provide a cable tray throughout the corridors for future use by the IT department.

**Budget:**

The construction budget for this project will be approximately \$2,250,000. AE team shall provide updated cost estimates and budgets throughout design in order to refine and update scope as necessary.

**Schedule:**

Design award September 2015

Design complete and ready for final review December 2015

Bid Documents available January 2016

Construction award March 2016

Construction during the summer 2016. WSU will move everyone out of the building right after finals and the construction shall be complete prior to the Fall 2016 semester.